

A PROPOSED NEW METHOD OF OPERATING FOR THE RADICAL CURE OF INGUINAL HERNIA.¹

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I DESIRE to present to the Society a new operation for the radical cure of inguinal hernia, and to enumerate a few of what I conceive to be its merits. In doing so I have no desire to decry any of the open methods now in use, all of which, especially the McBurney, have received well-merited¹ favor from the profession; but simply to add another procedure which I trust may prove useful in dealing with a large class of cases of this otherwise very troublesome affection.

The procedure consists, in brief, in a prolongation of the incision through the internal opening upward, into a more or less extensive laparotomy, as the exigencies of the case may require; dissection of all or a portion of the sac carefully from all its attachments within the canal and at the internal ring; ligation of the sac at some point within the canal; lifting the sac upward into the line of the abdominal incision above the ring and fixing it there, and subsequent closure of the abdominal incision, canal and scrotal incisions after the manner described below by diagram and in detail.

The first part of the incision is made in the usual manner over the tumor. The sac is not now treated differently from usual except that, being dissected out or cut off within the canal after being ligatured, it is not dropped back into the cavity of the abdomen, but carefully retained outside the abdominal wall. The sac is now carefully dissected from around the internal ring and

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slightly separated from its internal border, the latter being freshened and made as free as possible, after which the incision is carried directly upward through the inner opening sufficiently far to enable the sac to be engaged in it without being too much folded upon itself. The advantage of the upward incision is that, whether the hernia be an ordinary oblique inguinal, or a direct inguinal, the deep epigastric artery is avoided. The object in making the incision sufficiently long is to prevent a folding of the sac on itself and thus get a closer and firmer union within the line of the incision with the parietal peritonæum, and a more extensive attachment to the abdominal wall. The next step consists in fixing the sac in the line of the abdominal incision (Fig. 1). This is done by deep suturing carried downward through all the tissues, including the peritonæum on one side, thence through both layers of the sac, and reversed on the opposite side from the abdominal cavity to the integument, which sutures are not yet closed but cut off long and laid back on the surface of the abdomen until all sutures in the abdominal incision are passed. An all-important fact must here not be overlooked, the tendency of these fascia of the abdominal wall, owing to the peculiar direction of their fibres (and, indeed, the same may be said of the muscular tissues as well in this situation, as the incision is outside the rectus muscle), to contract underneath the integument, and the possible failure to properly coapt the different elements of the wall, tissue to tissue, owing to this contraction, without greater traction than is justified in the proper closure of the wound. Hence, an assistant should draw forward these contracting tissues flush with the integument on both sides, both during the passage of these first deep sutures and the subsequent more superficial layer (Fig. 2).

This deep layer of sutures passed, which is intended to approximate the peritonæum and hold the sac in place, the sac is now cut off in the depths of the wound shortly above the peritonæum and closed by a buried absorbent suture and the second set of sutures is passed, an assistant counteracting, as before, the contraction of the tissues from both sides. These go only below the fascial tissues, passing across above the peritonæum and the now closed sac, and are meant to approximate these tissues

fascia to fascia, muscle to muscle, as these fascial tissues, especially the deep fascia, are regarded as the bulwarks against the possibility of ventral hernia; and it is desirable to bring homologous tissues into apposition, as only in this event can the resulting cicatrix be regarded as permanent. One other condition must here be mentioned: unless this tendency of the fascial tissues to contract in different directions and withdraw underneath the skin is carefully watched by the operator and drawn flush by an assistant, who must be certain that every tissue is included in the grasp of his forceps during the passage of both sets of sutures, one or more coverings will fail of complete approximation, and though the wound unite and there be no resulting ventral hernia at the point of incision, the general abdominal wall will be weakened in degree by the resisting force of this non-approximated fascia at one side or other of the incision; and the expulsive force of the abdominal contractions being now taken off the ring entirely and deflected against the abdominal walls, there is likely to be a bulging of these walls at this weak point, and in time a resulting ventral hernia. This protrusion, if it occur, will probably be on the outside of the incision, as here the fascia, being longest, has more room for contraction. This danger, as that of ventral hernia in general, should be avoided by a close attention, in detail, to the rules of closure laid down.

Before the closure of either of these two sets of sutures now passed, and after the cord has been placed to the outer side of the incision in the canal, two curved or crucial sutures (sometimes both may be needed) are passed at the internal opening of the canal from below upward, dipping over the cord but entering and passing through the tissues after the manner in the majority of operations for ruptured perineum—traversing them, in other words. These last sutures should now be closed first, but before being tied they should be drawn together to see that complete and perfect approximation is had at the internal opening in order to permit the passage of a supplemental suture at this point if found necessary in very large openings, while the approximation can be seen from below and above the opening (it can always be seen from below and always felt from above) and, if found to be

complete, they are tied, when the inner opening is found closed upon itself like the inner and middle contracting coats of an artery after ligature. The abdominal wound is now closed, commencing with the deep sutures and followed by the more superficial set—the fascial (Fig. 3).

The hernial canal and scrotal openings are closed with deep suturing. No drainage is used, unless the sac or its contents has been diseased, as complete obliteration of the whole canal is attempted, except the narrow canal through which the cord yet passes.

One other precaution, perhaps, should be given for those not accustomed to this class of operations, the necessity for a careful removal of all fat from the neighborhood of the internal opening and the freshening of the edges of the tissue at this point for better union.

The points of originality claimed in this operation are: A line of incision through the abdominal wall suitable for any inguinal hernia; the attachment of the hernial sac in the line of the abdominal incision above the internal opening diverting the expulsive efforts of the abdominal muscles from the internal ring to the abdominal parietes; and the method of closure of the abdominal wound so as to obviate the danger of ventral hernia, the latter point adapted to the exigencies of this operation from the laparotomists.

Its advantages, briefly enumerated, are considered to be:

(1) It takes only the ordinary time for the closure of any wound to make firm closure of this, as there should be a union by first intention.

(2) It obviates the use of a truss, as the pressure is no longer against the internal ring, and anything in the way of a truss in this situation more than a broad band would do harm instead of good by causing an absorption of the cicatricial tissue.

(3) It deflects all expulsive efforts from the ring and canal to the abdominal parietes, thereby lessening greatly the liability to a recurrence in the old channel; and by so doing leaves the ring and canal in a perfectly quiescent state during the whole progress of healing.

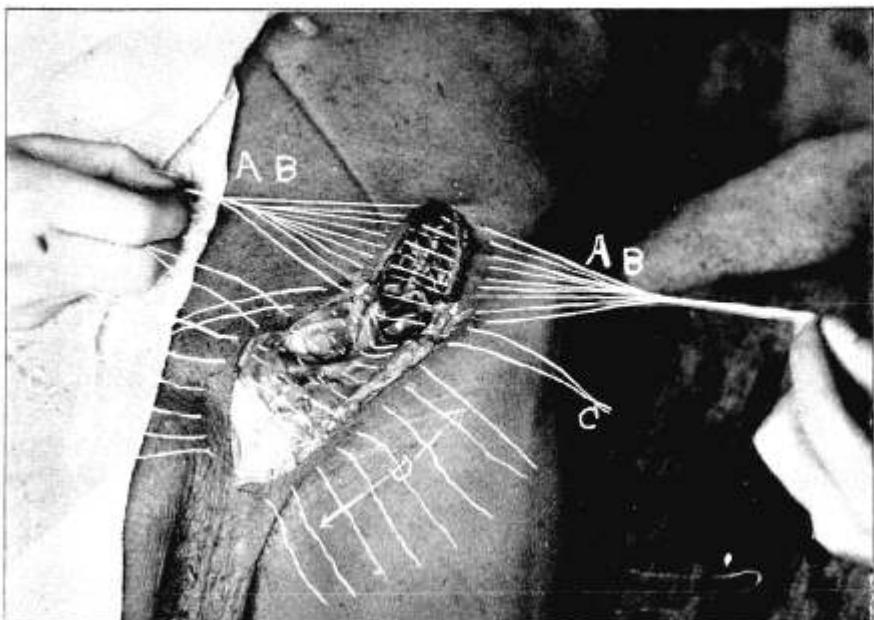


FIG. 3.—AB.—Deep and superficial sutures.
C.—Crucial sutures at internal opening.
D.—Sutures closing the hernial canal.



FIG. 4.—Result of Baxter's operation for hernia in Dr. A. W. Boyd's case.

(4) It affords a smooth, instead of a pouched covering to the inner ring, which covering has sometimes the advantage of being thickened.

(5) It avoids any necessity for traction on the sac or its contents, hence lessens materially the danger of rupture of sac or contents in diseased condition.

(6) It allows complete exsection of sac below the internal ring if advisable in diseased conditions, and affords abundance of room for resection of the gut, if found necessary.

(7) It is applicable to nearly all cases of inguinal hernia, is easy of execution and affords excellent results, fine cicatrix and complete obliteration of the whole canal.

Its two dangers are ventral hernia and pressure over the cord by contraction of cicatrix. The first does not seem to me so great where care is taken to approximate homologous tissues as it is through an imperfectly closed and obliterated ring and canal; or a perfectly closed one, with the changing conditions in its resultant connective tissue cicatrix, at this point, with the constant pressure upon it. The danger from pressure by contraction on the cord is neither greater nor less than it is in any of the open methods which do not, as a part of their procedure, excise the cord and testicle. I present to you, also, a photograph (Fig. 4) of a late result, by this method, operated upon by Dr. A. W. Boyd, of Chattanooga, Tenn. The patient was an old man with a large amount of adipose tissue. Hernia of the direct kind and the size of a child's head, and of many years standing. The canal and openings so large as to make it an impossibility to retain it with a truss. The sac attachments were extensive, but so far as could be ascertained there was no history of strangury at any time. The union here seemed complete, and the man "as well as ever," as he expressed it in two weeks. He was at work as a track hand, hauling rails and ties in a wheelbarrow, in six weeks. In this case the whole expulsive efforts of the abdominal muscles expend themselves to the outside of the incision and above the internal ring.

I realize, of course, my temerity in bringing forward an operation of this character without further practical demonstration

of its effects, and without a longer period of trial of its lasting effects than the reported case gives, but, in a certain sense, it is not an untried experiment, as there is no part of its separate procedures that has not been tried in operations of different character having different objects in view, and its point of weakness, if such exists, would be in a possible failure of proper union of the abdominal parietes, and the laparotomists have demonstrated extensively the issues to be met here, and how to meet them.